

In the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1 1. (Currently Amended) A processing device comprising:
2 a processing module capable of multitasking multiple tasks;
3 one or more associated circuits, ~~which may be selectively~~
4 ~~enabled and disabled responsive to a control signal,~~ coupled to
5 said processing module for supporting the processing module, each
6 of said associated circuits having power circuitry for either
7 enabling or disabling the associated circuit responsive to a power
8 input, at least one of the associated circuits being used by more
9 than one task;
10 a ~~memory~~ task attribute register storing a ~~control word~~ task
11 attribute bits for enabling and disabling the associated circuits,
12 wherein each task has an ~~associated control word~~ task attribute
13 bits associated therewith which ~~is~~ are stored in the ~~memory~~ task
14 attribute register while the task is being executed by the
15 processing module; and
16 a logical OR gate having inputs receiving a bit of each the
17 task attribute register corresponding to the at least one
18 associated circuit used by more than one task and an output
19 connected to the power input of the associated circuit used by more
20 than one task to enable the associated circuit used by more than
21 one task when task using the associated circuit is being executed
22 by the processing module and to disable the associated circuit used
23 by more than one task when no task using the associated circuit is
24 being executed by the processing module.

Claims 2 to 5. (Cancelled)

1 6. (Original) The processing device of claim 1 wherein said
2 processing module is a microprocessor module.

1 7. (Original) The processing device of claim 1 wherein said
2 processing module is a digital signal processor.

1 8. (Original) The processing device of claim 1 wherein at
2 least one of said associated circuits is a caching circuit.

1 9. (Original) The processing device of claim 1 wherein one
2 of said associated circuits is a coprocessor.

1 10. (Original) The processing device of claim 1 wherein said
2 processing module comprises a first processing module, and further
3 comprising one or more additional processing modules.

1 11. (Currently Amended) A method of operating a processing
2 device including a processing module capable of multitasking
3 multiple tasks coupled to one or more associated circuits, at least
4 one of the associated circuits being used by more than one task,
5 comprising the steps of:

6 identifying each of a plurality of current ~~task~~ tasks; and
7 storing ~~a control word~~ task attribute bits associated with
8 ~~said current~~ currently executing task in a ~~memory~~ task attribute
9 register; and

10 selectively enabling or disabling power to the associated
11 circuits during execution of said current task responsive to said
12 ~~control word~~ task attribute bits stored in said task attribute
13 register; and

14 logical ORing task attribute bits of said more than one task
15 corresponding to said at least one associated circuit used by more
16 than one task to enable said associated circuit used by more than

17 one task when any task using said associated circuit is being
18 executed by the processing module and to disable said associated
19 circuit when no task using said associated circuit is being
20 executed by the processing module.

Claims 12 to 15. (Canceled)

1 16. (Original) The method of claim 11 wherein said processing
2 module is a microprocessor module.

1 17. (Original) The method of claim 11 wherein said processing
2 module is a digital signal processor.

1 18. (Original) The method of claim 11 wherein at least one of
2 said associated circuits is a caching circuit.

1 19. (Original) The method of claim 11 wherein one of said
2 associated circuits is a coprocessor.

1 20. (Original) The method of claim 11 wherein said processing
2 module comprises a first processing module, and further comprising
3 one or more additional processing modules.

Claims 21 and 22. (Canceled)